

Title (en)

Hydrogen storage using carbon-metal hybrid compositions

Title (de)

Wasserstoffspeicherung, die Kohlenstoff-Metall Hybridzusammensetzungen verwendet

Title (fr)

Stockage d'hydrogène utilisant un composé hybride de carbone-métal

Publication

EP 1209119 B1 20060823 (EN)

Application

EP 01127351 A 20011121

Priority

- US 25275100 P 20001122
- US 98808401 A 20011119

Abstract (en)

[origin: EP1209119A2] A process is provided for the transport and storage of hydrogen by reversible sorption and containment within carbon-metal hybrid materials. The process comprises contacting a carbon-metal hybrid composition with a hydrogen-containing gas at conditions of temperature and pressure whereby the carbon-metal hybrid composition sorbs the hydrogen gas. The hydrogen that is sorbed in the carbon-metal composition is subsequently released by lowering the H₂ pressure and/or increasing the temperature to levels which cause desorption of the hydrogen gas.

IPC 8 full level

C01B 3/00 (2006.01); **F17C 11/00** (2006.01); **B01J 20/02** (2006.01); **B01J 20/20** (2006.01); **C01B 3/02** (2006.01)

CPC (source: EP KR US)

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Cited by

RU2477704C2; EP1573757A4; DE102005004589A1; DE102005004589B4; WO2004059670A1; WO2005104179A3; WO2009057127A1; WO2004113222A1; WO2004048259A1

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